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charge collection time

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chassis

charge collection time (1) (x-ray energy spectrometers) (charged-particle detectors) (germanium gamma-ray detectors) (semiconductor) The time interval, after the passage of an ionizing particle, for the integrated current flowing between the terminals of the detector to increase from 10% to 90% of its final value. *Synonym:* charge sweep-out time.

(IM/NPS/HFIM/NID) 314-1971w, 759-1984r, 300-1988r, 325-1996

(2) (semiconductor radiation detectors) The time interval, after the passage of an ionizing particle, for the integrated current flowing between the terminals of the detector to increase from 10% to 93% of its final value.

(NID) 301-1976s

charge, connection *See:* connection charge.

charge-coupled device A storage device in which individual semiconductor components are connected to each other so that the electrical charge at the output of one device provides the input to the next.

(C) 610.10-1994w

charge, customer *See:* customer charge.

charged aerosol Ion comprised of charged particles, liquid or solid, suspended in air. Typical radius is in the range of 2×10^{-8} m to 2×10^{-7} m. Mobility is in the range of 10^{-9} m to 10^{-7} m²/Vs. *Note:* Historically, these have been referred to as large or Langevin ions. The use of the term "charged aerosols" is encouraged.

(T&D/PE) 1227-1990r

charge delay The time delay after answer supervision is recognized before the beginning of charge recording. In public telephone service (PTS), a call is defined as answered when the called party off-hook supervision duration exceeds the minimum chargeable duration (MCD) after an allowance equal to the worst possible inaccuracy known about the timing sensor has been applied. Should called supervision return on-hook before the MCD has elapsed, MCD timing may start again with the next called party off-hook transition.

(COM/TA) 973-1990w

charge-delay interval (telephone switching systems) The recognition time for a valid answer signal in message charging.

(COM) 312-1977w

charge, demand *See:* demand charge.

charge, energy *See:* energy charge.

charge, facilities *See:* facilities charge.

charge pump Circuitry that is used to create an on-chip voltage that is greater in magnitude than the voltage available from the device power supply. This voltage is typically used for the write operation.

(ED) 1005-1998

charge-resistance furnace A resistance furnace in which the heat is developed within the charge acting as the resistor. *See also:* electrothermics.

charge-sensitive preamplifier An amplifier preceding the main amplifier in which the output amplitude is proportional to the charge injected at the input. *See also:* voltage-sensitive preamplifier.

(NPS) 325-1996

charge, space *See:* space charge.

charge storage (semiconductor) (nonlinear, active, and non-reciprocal waveguide components) An electrical property of step recovery, dual mode, and p-i-n diodes. As the diode is driven into forward conduction by the first half-cycle of the incident signal, it stores a charge and appears as a low impedance. As the polarity of the incident signal reverses, the charge is extracted, and the diode remains in its low-impedance state until virtually all of the charge is removed, whereupon the diode rapidly switches to a high-impedance state.

(MTT) 457-1982w

charge-storage tube (electrostatic memory tube) A storage tube in which the information is retained on the storage surface in the form of a pattern of electric charges.

(ED) 158-1962w

charge sweep-out time *See:* charge collection time.

charge, termination *See:* termination charge.

charge-to-third-number call (telephone switching systems) A call for which the charges are billed to a number other than that of the calling or called number.

(COM) 312-1977w

charge transfer The process of charge movement, especially that occurring during a transient discharge.

(PE/T&D) 539-1990

charge transit time *See:* transit time.

charge voltage The voltage difference between the intruder and the receptor just prior to an ESD.

(SPD/PE) C62.47-1992r

charge, wheeling *See:* wheeling charge.

charging (1) (overhead power lines) The process, or the result of any process, by which an atom, molecule, molecular cluster, or aerosol acquires either a positive or a negative charge.

(PE/T&D) 539-1990

(2) (electrostatography) *See also:* sensitizing; electrostatography.

charging (capacitance) current Current resulting from charge absorbed by the capacitor formed by the capacitance of the bushing.

(PE/TR) C57.19.03-1996

charging circuit (surge generator) (surge arresters) The portion of the surge generator connections through which electric energy is stored up prior to the production of a surge. *See also:* surge arrester.

(PE) [8], 64

charging current (1) (transmission lines) The current that flows in the capacitance of a transmission line when voltage is applied at its terminals. *See also:* transmission line.

(T&D/PE) [10]

(2) The maximum continuous current at any charge voltage that may flow at the ESD simulator probe tip as measured to the return path of the simulator through a 1500 Ω resistor that is connected to the probe tip.

(EMC) C63.16-1993

charging inductor An inductive component used in the charging circuit of a pulse-forming network.

(MAG) 306-1969w

charging rack A device used for holding batteries for mining lamps and for connecting them to a power supply while the batteries are being recharged. *See also:* mine feeder circuit.

(EEC/PE/MIN) [119]

charging rate (1) (storage battery) (storage cell) The current expressed in amperes at which a battery is charged. *See also:* charge.

(EEC/PE) [119]

(2) The output current expressed in amperes at which the battery is charged.

(IA/PSE) 602-1996

charles or kino gun *See:* end injection.

chart (1) (navigation aids) A map intended primarily for navigation use.

(AES/GCS) 172-1983w

(2) (recording instrument) The paper or other material upon which the graphic record is made. *See also:* moving element.

(EEC/PE) [119]

chart-comparison unit (navigation aids) A device for the simultaneous viewing of a navigational chart in such a manner that one appears superimposed upon the other.

(AES/GCS) 172-1983w

chart mechanism (recording instrument) The parts necessary to carry the chart. *See also:* moving element.

(EEC/ERI) [111]

chart scale (recording instrument) The scale of the quantity being recorded, as marked on the chart. *Note:* Independent of and generally in quadrature with the chart scale is the time scale that is graduated and marked to correspond to the principal rate at which the chart is advanced in making the recording. This quadrature scale may also be used for quantities other than time. *See also:* moving element.

(EEC/PE) [119]

chart scale length (recording instrument) The shortest distance between the two ends of the chart scale. *See also:* instrument.

(EEC/PE) [119]

chassis (1) (printed-wiring boards) (frame connection: equivalent chassis connection) A conducting connection to a chassis or frame, or equivalent chassis connection of a printed-

chassis shield

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wiring board. The chassis or frame (or equivalent chassis connection of a printed-wiring board) may be at substantial potential with respect to the earth or structure in which this chassis or frame (or printed-wiring board) is mounted.

(GSD) 315-1975r

(2) A subrack that is in accordance with IEC 50.

(C/BA) 1101.3-1993

(3) A subrack as specified in IEC 50. (C/BA) 1101.4-1993

chassis shield A shield that resides between two modules and attaches to the mainframe. (C/MM) 1155-1992

chatter A condition that results when transceiver electronics fail to shut down and the transceiver floods the network with random signals. *Synonym:* transceiver chatter. (C) 610.7-1995

chatter, relay See: relay chatter time; relay contact chatter.

CHDL See: computer hardware description language.

Chebyshev filter A filter whose pass-band frequency response has an equal-ripple shape brought about by the use of Chebyshev cosine polynomials as the approximating function.

(CAS) [13]

check (1) (monitoring radioactivity in effluents) The use of a source to determine if the detector and all electronic components of the system are operating correctly.

(NI) N42.18-1980r

(2) **(radiological monitoring instrumentation)** To determine if the detector and all electronic components of a system are operating satisfactorily by determining consistent response to the same source. (NI) N320-1979r

(3) **(instrument or meter)** Ascertain the error of its indication, recorded value, or registration. *Note:* The use of the word "standardize" in place of "adjust" to designate the operation of adjusting the current in the potentiometer circuit to balance the standard cell is deprecated. See also: test.

(EEC/PE) [119]

(4) **(computer-controlled machines)** A process of partial or complete testing of either the "correctness of machine operations" or "the existence of certain prescribed conditions within the computer." A check of any of these conditions may be made automatically by the equipment or may be programmed. (C) 162-1963w, 270-1966w

(5) **(nuclear power generating station)** The use of a source to determine if the detector and all electronic components of the system are operating correctly. (PE/NP) 380-1975w

(6) (A) **(transmission line supporting structures)** A separation along the grain of the wood, the separation occurring across the annual rings. (B) **(transmission line supporting structures)** A lengthwise separation of the wood that usually extends across the rings of annual growth and commonly results from stresses set up in wood during seasoning.

(T&D/PE) 751-1990

(7) **(software)** To verify the accuracy of data transmitted, manipulated, or stored by any unit or device in a computer. See also: automatic check; sequence check; check key; echo check; consistency check; check character. (C) 610.5-1990w

checkback (1) The retransmission from the receiving end to the initiating end of a coded signal or message to verify, at the initiating end, the initial message before proceeding with the transmitting of data or a command.

(SWG/PE) C37.100-1992

(2) See also: check before operate.

(PE) 599-1985w

check back The retransmission from the receiving end to the initiating end of a coded signal or message to verify, at the initiating end, the initial message before proceeding with the transmitting of data or a command.

(SWG/PE) C37.100-1981s

checkback message The response from the receiving end to the initiating end of a coded signal or message. See also: complete checkback message; partial checkback message.

(SWG/PE/SUB) C37.100-1992, C37.1-1987s

check before operate (data transmission) A message and control technique providing for confirmation of control request before operation. *Synonym:* checkback. (PE) 599-1985w

checkout time

check bit A binary check digit. For example, a parity bit.

(C) 1084-1986w

check bits (data transmission) Associated with a code character or block for the purpose of checking the absence of error within the code character or block. See also: data processing.

(COM) 140

check box A visual user interface control used to set and reset parameters that have only two (binary) values (e.g., True/False, On/Off, Active/Inactive). When the control is set, a visual indication is provided to indicate its state (e.g., the check box is filled). The user can reset the parameter by selecting the check box again. A check box can be within a group of check boxes. Normally a group of check boxes are not mutually exclusive.

(C) 1295-1993w

check card A punch card so formatted as to be suitable for use as a negotiable bank check; for example, a U.S. series E bond.

(C) 610.10-1994w

check character (1) A character used for the purpose of performing a check, but often otherwise redundant. (C) [20]

(2) (A) **(data management)** A character used for the purpose of performing a check. (B) **(data management)** A single character from a check key. (C) 610.5-1990

(3) A character added to a group of characters to provide data redundancy to permit error detection and error correction.

(C) 610.7-1995

(4) A calculated character often included within a bar code symbol whose value is used for performing a mathematical check of the validity of the decoded data.

(PE/TR) C57.12.35-1996

check code See: security code.

check digit (1) A digit used for the purpose of performing a check, but often otherwise redundant. See also: forbidden combination; check. (C) [20]

(2) **(mathematics of computing)** One of a set of redundant digits in a word, byte, character, or message that depends upon the remaining digits in such a fashion that if a digit changes, the error can be detected. (C) 1084-1986w

checking or interlocking relay (power system device function numbers) A relay that operates in response to the position of a number of other devices (or to a number of predetermined conditions) in an equipment, to allow an operating sequence to proceed, or to stop, or to provide a check of the position of these devices or of these conditions for any purpose.

(PE/SUB) C37.2-1979s

check key A key that is used for the purpose of performing a check; for example, in the following example the check key is equal to the sum of the first and last digit in field x; this check key could be used to ensure that field x is accurate and complete.

record number	field x	check key
1	0125	5
2	1136	7
3	2228	10

(C) 610.5-1990w

checkout (1) (test, measurement, and diagnostic equipment) A sequence of tests for determining whether or not a device or system is capable of, or is actually performing, a required operation or function.

(MIL) [2]

(2) **(software)** Testing conducted in the operational or support environment to ensure that a software product performs as required after installation. (C) 610.12-1990

checkout equipment (test, measurement, and diagnostic equipment) Electric, electronic, optical, mechanical, hydraulic, or pneumatic equipment, either automatic, semiautomatic, or any combination thereof, which is required to perform the checkout function. (MIL) [2]

checkout time (test, measurement, and diagnostic equipment) Time required to determine whether designated characteristics of a system are within specified values. (MIL) [2]

muffler

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multielectrode tube

electrode to the magnitude of an infinitesimal change in the voltage at the i th electrode under the conditions that the current to the m th electrode remain unchanged and the voltages of all other electrodes be maintained constant. *See also*: electron-tube admittances. (ED) 161-1971w, [45]

muffler (of a fuse) An attachment for the vent of a fuse, or a vented fuse, that confines the arc and substantially reduces the venting from the fuse. (SWG/PE) C37.100-1992

multi-access contention protocol The protocol used on the Aloha network by which a station transmits a message at will and then listens for an acknowledgment. If no ACK is received within a randomly selected timeout interval, the message is re-transmitted. (C) 610.7-1995

multiaddress *See*: multiple-address.

multiaddress format An address format that contains more than one address field; for example, a three-address instruction. (C) 610.10-1994w

multiaddress instruction (1) A computer instruction that contains more than one address field. *Synonym*: multiple-address instruction. *Contrast*: one-address instruction. (C) 610.12-1990

(2) A computer instruction that contains more than one address. *Synonym*: multiple instruction. (C) 610.10-1994w

multinode tank (multinode tube) An electron tube having two or more main anodes and a single cathode. *Note*: This term is used chiefly for pool-cathode tubes. (ED) [45]

multiaperture core A magnetic core, usually used for non-destructive reading, with two or more holes through which wires may be passed in order to create more than one magnetic path. *Synonym*: multiple aperture core. (C) 610.10-1994w

multiband image A set of images of the same scene, each formed by radiation from a different segment of the spectrum. (C) 610.4-1990w

multibeam antenna An antenna capable of creating a family of major lobes from a single non-moving aperture, through use of a multiport feed, with one-to-one correspondence between input ports and member lobes, the latter characterized by having unique main beam pointing directions. *Note*: Often, the multiple main beam angular positions are arranged to provide complete coverage of a solid angle region of space. (AP/ANT) 145-1993

multibeam oscilloscope An oscilloscope in which the cathode-ray tube produces two or more separate electron beams that may be individually or jointly controlled. *See also*: oscillograph; dual-beam oscilloscope. (IM/HFIM) [40], 311-1970w

multibit point interface Multibit (e.g., BCD, gray code) point. Master Station or RTU (or both) element(s) that inputs a series of multibit quantities in parallel. (SUB/PE) C37.1-1994

multicable penetrator A device consisting of multiple non-metallic cable seals assembled in a surrounding metal frame, for insertion in openings in decks, bulkheads, or equipment enclosures and through which cables may be passed to penetrate decks or bulkheads or to enter equipment without impairing their original fire or watertight integrity. (IA/MT) 45-1998

multicast (1) A transmission mode in which a single message is sent to multiple network destinations, (i.e., one-to-many). (DIS/C) 1278.1-1995, 1278.2-1995

(2) A mode of operation in which the M-module transmits data simultaneously (i.e., during a single message) to a predefined subset of the S-modules currently connected to the bus. Also, a message transmitted in this mode. (TT/C) 1149.5-1995

(3) A technique that allows copies of a single packet to be passed to a selected subset of all possible destinations. *Contrast*: broadcast. (C) 610.7-1995

(4) A medium access control (MAC) address that has the group bit set. A multicast MAC service data unit (MSDU) is one with a multicast destination address. A multicast MAC

protocol data unit (MPDU) or control frame is one with a multicast receiver address. (C/LM) 8802-11-1999

multicast address A special address indicating a specific group of end nodes. *local area networks*. (C) 8802-12-1998

multicast select bit 0; multicast select bit 1 Those bits in the Slave Status register of every S-module by means of which the S-module is programmed to be a member of one of the four possible multicast select groups. (TT/C) 1149.5-1995

multicast select group A group of S-modules that may be addressed simultaneously in a multicast. Four such groups are possible. Each has an address defined by IEEE 1149.5-1995. The multicast select group of an S-module is programmable. (TT/C) 1149.5-1995

multicavity magnetron A magnetron in which the circuit includes a plurality of cavities. *See also*: magnetron. (ED) 161-1971w

multicellular horn (electroacoustics) A cluster of horns with juxtaposed mouths that lie in a common surface. *Note*: The purpose of the cluster is to control the directional pattern of the radiated energy. (SP) [32]

multichannel analyzer (MCA) (x-ray energy spectrometers) An instrument which digitizes analog amplitude signal pulses and stores them in a memory as a function of their analog amplitude. (NPS/NID) 759-1984r

multichannel pulse-height analyzer (MCA) An electronic device that records and stores pulses according to their height. It consists of three function segments: an ADC to provide a means of measuring pulse amplitude; memory registers (one for each channel of the spectrum) to tally the number of pulses having an amplitude within a given voltage increment; an input/output section that permits transfer of the spectral information to other devices, such as a computer, oscilloscope display, or permanent storage media (disk or magnetic tape storage). *Synonym*: multichannel analyzer. (NI) N42.14-1991

multichannel radio transmitter A radio transmitter having two or more complete radio-frequency portions capable of operating on different frequencies, either individually or simultaneously. *See also*: radio transmitter. (AP/ANT) 145-1983s

multicharacter collating element A sequence of two or more characters that collate as an entity. For example, in some coded character sets, an accented character is represented by a (non-spacing) accent, followed by the letter. Another example is the Spanish elements "ch" and "ll." (C/PA) 9945-2-1993

multichip integrated circuit An integrated circuit whose elements are formed on or within two or more semiconductor chips that are separately attached to a substrate. *See also*: integrated circuit. (ED) 274-1966w

multicomputer *See*: multiprocessor.

multiconductor bundle *See*: bundle.

multiconstant speed motor (rotating machinery) A multi-speed motor whose two or more definite speeds are constant or substantially constant over its normal range of loads; for example A synchronous or an induction motor with windings capable of various pole groupings. (PE) [9]

multidimensional system A system whose state vector has more than one element. *See also*: control system. (PE/EDPG) [3]

multidrop (1) Said of the configuration of a bus with a single shared medium segment that allows one or more of its module connectors to be unoccupied without disturbing bus operation. (TT/C) 1149.5-1995

(2) Pertaining to a communication arrangement where several devices share a common transmission channel. *Contrast*: multipoint. *See also*: point-to-point. (C) 610.7-1995

multielectrode tube An electron tube containing more than three electrodes associated with a single electron stream. (ED) 161-1971w